Curriculum Vitae

Name:	**Henry Reyer Band**
Married:	Sharon Gail Glendinning, 2 children
Nationality:	USA
Languages:	English
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Birth Date/Place:	April 1, 1951 Wilmington, North Carolina, USA
Education:	B.Sc.: Massachusetts Institute of Technology, MA 1973 M.A.: Duke University, N.C. 1975 Ph.D.: Duke University, N.C. 1980
Positions:	1986-Present - Asst./Assoc./Senior Scientist, University of Wisconsin 1980-1986 - Project Assoc. /Senior Research Assoc. Northeastern University, Boston, Mass. 1979 - Lecturer, Duke University, N. C.

Experience:

BaBar IFR System manager, 2001-Present

Directed operation and maintenance of the BaBar IFR (muon) subsystem. Supervised postdocs and students in the operation of the IFR. Set and developed strategies to maintain RPC performance and to minimize aging. Worked with Princeton and Italian colleagues to plan and implement conversion of the highest rate RPCs in the Forward Endcap to avalanche mode operation in 2006. Planned and implemented upgrades such as the background shielding wall installed in 2004 and the gas humidification system installed in 2004. Lead efforts by Wisconsin postdocs and graduate students to develop a neural net muon particle identification algorithm. This muon ID algorithm was significantly superior to previous cut-based algorithms and has become the BaBar standard muon identifier. Planned, designed, and supervised with BaBar management and engineers the multimillion dollar upgrade of the IFR forward endcap in 2002. Developed with Italian colleagues strict quality control procedures and methods for the production of RPC chambers. Authored and edited several NIM articles on the IFR or RPC aging. Presented studies of RPC performance and aging at conferences and CERN. Designed safety protocols and training for IFR system workers.

BaBar IFR Deputy System Manager, 1998-2000

Directed final installation and commissioning of the IFR detector system. After initial operations revealed numerous problems, initiated and led installation of a cooling system for the BaBar steel/IFR, led upgrades of the high voltage, gas and monitoring systems. Studied RPC failure modes.

SiD detector Concept - Muon System design study coordinator 2005-present

Initiated studies to optimize the SiD muon system design and to develop reliable cost estimates. Designed preliminary RPC layout for SiD. Started R&D program to test applicability of IHEP RPCs and SLAC KPIX readout chips to future RPC detectors at linear colliders.

Spokesperson for T-419 SLAC Test Beam Experiment 1997-8

Lead effort to measure the polarization of the SLAC positron beam thereby eliminating a possible systematic bias to the SLD A_{LR} measurement.

SLD 1986-98

Designed and operated the LINAC and extraction line Moller polarimeters. Part of the design team for the SLD beam line/mask region. Modeled beam backgrounds, designed background monitors, and implemented beam protection devices.

E-143, E-154, E-155, E-155x 1989-98

Designed, built and operated the single arm Moller Polarimeters which determined the electron beam polarization for the SLAC polarized structure function experiments. Authored NIM article on polarimeter.

Interest Areas: Experimental High Energy Physics, Particle Detectors

Memberships: American Physical Society Division of Particles and Fields
Sigma Xi

Committees: BaBar Technical Board 2000- present
SiD Design Concept Advisory Board 2005 – present
SLAC Operating Safety Committee 2005-6
NSS Program Reviewer IEEE2006,7,8
BaBar Speakers Bureau Deputy Chair 2004-5
BaBar Analysis Review Committee(3)
BaBar Spokesperson-Elect Nominating Committee (2007)
ALCPG07 Parallel Session Convenor

Recent Talks and Presentations

"Muon Detectors" SiD Meeting at RAL, Abingdon, England April 2008.

"Aging and Performance of BaBar RPCs" 2007 IEEE Nuclear Science Symposium, Honolulu, Hawaii, Oct., 2007.

"Muon Detector Studies for SiD", "Muon/PID Status", ALCPG07, Fermilab, IL. Oct. 2007.

"Aging Studies of 2nd Generation BaBar RPCs" 2006 IEEE Nuclear Science Symposium, San Diego, California, Nov., 2006.

"SiD Muon System" SiD SLAC Workshop, Stanford, California, Oct., 2006.

"Hadronic Charm Decays" Beauty2006, Oxford, England, Sept., 2006.

"RPC Muon Option for SiD" ALCPG Vancouver Meeting, Vancouver, Canada, June, 2006.

"Muon Plans" SiD Fermilab Workshop, Batavia, Illinois, Dec., 2005.

"Performance and Aging Studies of BaBar Resistive Plate Chambers" RPC2005, Seoul, Korea, Oct., 2005.

"Performance of 2nd Generation RPCs in BaBar" 2004 IEEE Nuclear Science Symposium, Rome, Italy, Oct., 2004.

Selected List of Publications

Observation of CP violation in the B^0 meson system. BABAR Collaboration, Phys. Rev. Lett. 87, 091801 (2001).

Observation of a narrow meson decaying to $D^+(s)\ \pi^0$ at a mass of 2.32 GeV/c^2. BABAR Collaboration, Phys. Rev. Lett. 90, 242001 (2001).

Precise measurement of the left-right cross-section asymmetry in Z boson production by $e^+\ e^-$ collisions. SLD Collaboration, Phys. Rev. Lett. 73:25 (1994).

Determination of the Neutron Spin Structure Function. E142 Collaboration, Phys. Rev. Lett. 71:959, (1993).

Lifetime of Particles Containing B Quarks, MAC Collaboration, Phys. Rev. Lett. 51:1022, (1983).

Search for decays of B0 ---> mesons into e+ e-, mu+ mu-, and e+- mu-+ final states. BaBar Collaboration, Phys.Rev.D77:032007,2008.

Study of Excited Charm-Strange Baryons with Evidence for new Baryons Xi(c)(3055)+ and Xi(c)(3123)+, BABAR Collaboration, Phys.Rev.D77:012002,2008.

Search for lepton flavor violating decays tau+- ---> l+- omega (l = e, mu). BABAR Collaboration, Phys.Rev.Lett.100:071802, 2008.

Study of F- Production in BaBar RPCs, submitted to NIMA(in revision), SLAC-PUB-12854, Feb. 2008.

Hadronic charm decays from B factories, H.R. Band for the BaBar and Belle Collaborations, Nucl.Phys.Proc.Suppl.170:232-236, 2007.

Performance and Aging Studies of BaBar Resistive Plate Chambers, by H.R. Band et al, Nucl. P hys. Proc. Suppl. 158:139-142, 2006.

Review of Particle Physics, Particle Data Group, J.Phys.G33:1-1232, 2006.